

Terry S. Davidson
Application No. 10/713,643
Reply to Office Action mailed July 5, 2005

Attorney Docket: A-14-4

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THE CLAIMS

The claims in the application are follows:

CLAIMS:

1. (Currently amended) An electrosurgical instrument for removing tissue from a target site within or on a patient's body comprising:
 - (a) a shaft having proximal and distal end portions, and an active electrode comprised of a substantially flat active screen electrode disposed on the distal end portion of the shaft;
 - (b) a return electrode arranged on the shaft, and spaced from the active screen electrode;
 - ~~(c) [at least one electrical connector extending through the shaft that connects the active electrode with a high frequency power supply;]~~
 - (d c) at least one electrical coupling member adapted to secure the active screen electrode to the shaft and to electrically couple the active screen electrode to an [the] at least one electrical connector; and
 - (e d) an aspiration lumen disposed within the shaft and having a distal opening coupled to the [single] active screen electrode wherein the active screen electrode inhibits clogging of the aspiration lumen.
2. (Currently amended) The instrument of claim 1 wherein the active screen electrode comprises at least one aperture for passage of tissue fragments and fluid therethrough.
3. (Currently amended) The instrument of claim 1 wherein the active screen electrode is disposed on a lateral side of the shaft.
4. (Currently amended) The instrument of claim 1 further comprising an electrically insulating support member upon which the active screen electrode is mounted~~[to, the support member comprising an inorganic material]~~.

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5. (Currently amended) The instrument of claim 4 wherein the support member defines ~~has~~ an axial opening in communication with the aspiration lumen, and a lateral opening in contact with the active screen electrode.

6. (Currently amended) The instrument of claim 1 wherein the return electrode is [a] comprised of an annular member ~~ring-shaped~~.

7. (Currently amended) The instrument of claim 1 wherein the return electrode is spaced from the active screen electrode such that, when the active screen electrode is brought adjacent to a tissue structure immersed in an electrically conductive fluid, the active screen electrode is positioned between the return electrode and the tissue structure, and the electrically conductive fluid completes a conduction path between the active screen electrode and the return electrode.

8. (Currently amended) The instrument of claim 7 wherein the active and return electrodes are configured, upon the application of a sufficiently high frequency voltage therebetween, to vaporize the conductive fluid in a thin layer over at least a portion of the active electrode, and to induce the discharge of energy from the vapor layer.

9. (Currently amended) The instrument of claim 1 wherein said at least one electrical coupling member comprises ~~is~~ a ballwire.

10. (Original) The instrument of claim 1 wherein said at least one electrical coupling member comprises a plurality of electrical coupling members.

11. (Currently amended) The instrument of claim 2 wherein said apertures in the active screen electrode comprises a plurality of apertures.

12. (Original) The instrument of claim 11 wherein said apertures are circular.

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13. (Currently amended) The instrument of claim 11 wherein said apertures comprise triangular corners.

14. (Original) The instrument of claim 13 wherein said apertures are rectangular.

15. (Original) The instrument of claim 4 further comprising a cap arranged on the distal end portion of the shaft wherein said cap comprises an opening that receives said insulating support.

16. (Currently amended) A method for treating target tissue [~~comprising removing said target tissue using an instrument as recited in claim 1~~] whereby a portion of the target tissue is removed, comprising the steps of:

advancing a probe comprised of a substantially flat active screen electrode disposed on the distal end portion of the probe such that the active electrode is positioned in close proximity to the target tissue;

irrigating the target tissue with an electrically conductive fluid;

applying suction to an aspiration lumen disposed within the probe to remove ablated material from the target site, the aspiration lumen being in fluid communication with openings in the screen of the active electrode; and

applying a high frequency voltage between the active electrode and a return electrode ablate tissue at the target site,

whereby the screen electrode inhibits clogging of the aspiration lumen.

17. (Original) The method of claim 16 wherein said target tissue is within a joint.

18. (Original) The method of claim 17 wherein said tissue is selected from the group consisting of meniscus, synovial tissue, and articular cartilage.

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19. (Original) The method of claim 16 wherein said aspiration lumen is connected with a vacuum source to aspirate material through said aspiration lumen.

20. (Currently amended) The instrument of claim 15 wherein said cap is electrically conductive and comprises ~~forms~~ a portion of the return electrode.

21. (Deleted)

22. (Currently amended) The instrument of claim ~~2~~1 wherein the return electrode is arranged on said distal end portion and is ring shaped.

23. (Currently amended) The instrument of claim 1~~22~~ further comprising a liquid supply lumen adapted to supply liquid to the distal end portion of the shaft.

24. (Previously presented) The method of claim 16 wherein said tissue is a tissue selected from the group consisting of the tonsils and adenoids.